Cont'd B1

62. (NEW) A system according to claim 21, wherein said optical signal has a wavelength of about 1.55 μm.

REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

I. STATUS OF THE CLAIMS

Claims 10, 11, 18 and 19 are canceled.

Claims 1-8, 15, 16, 21-24, 29-32, 36-38, 42-47, 49-52, and 55-58 are allowed.

New claims 59-62 are added.

In view of the above, it is respectfully submitted that claims 1-8, 15, 16 and 20-62 are currently pending and under consideration.

II. OBJECTION TO THE CLAIMS

On page 2 of the Office Action, claims 10, 11, 18 and 19 are "objected to," as being of improper dependent form for failing to further limit the subject matter of a previous claim. The Examiner indicates that the claims do not depend from a *preceding* claim.

Claims 10, 11, 18, and 19 are canceled herein.

New claims 59 and 60 are added and include the same features as claimed in claims 10 and 11, respectively. Accordingly, new claims 59 and 60 are now dependent on claim 15.

Also, new claims 61 and 62 are added and include the same features as claimed in claims 18 and 19, respectively. Accordingly, new claims 61 and 62 are now dependent on claim 21.

Therefore, claims 59 and 60 depend from the preceding claim 15, and claims 61 and 62 depend from the preceding claim 21 to overcome the objection.

In view of the above, it is respectfully submitted that the objection is overcome.

III. REJECTION OF CLAIMS 25, 28, 33, 48, 53 AND 54 UNDER 35 U.S.C. § 102(B) AS BEING ANTICIPATED BY DELAVAUX ET AL.

On page 2 of the Office Action, claims 25, 28, 33, 48, 53 and 54 are rejected under 35 U.S.C. § 102(b) as being anticipated by Delavaux et al. (USP# 5,608,562).

The present invention as recited, for example, in claim 25 relates to a method comprising "said dispersion compensator being provided between front stage amplifier and a rear-stage amplifier of said optical transmitter."

Delavaux discloses an optical communication system that uses adjustable dispersion compensating fibers to compensate for dispersion in system fibers. In Figures 1 and 2, Delavaux discloses a dispersion compensation unit 9 between a pre-amplifier 5 and an amplifier 7, which are located between a transmitter 1 and a receiver 3.

The Examiner asserts that in column 4, lines 57-63, Delavaux discloses that a compensator is located between pre- and post-amplifiers at the transmitter or at the receiver.

However, Delavaux does not disclose that a dispersion compensator is provided between a front-stage amplifier and a rear-stage amplifier of a transmitter as claimed, for example, in claim 25 of the present application. (Compare Figures 1, 2 and 4 of Delavaux and Figure 3A of the present application).

Further, although Delavaux discloses in column 4, lines 62-63, that a dispersion compensation unit may be connected to either the transmitter or the receiver, he does not suggest or disclose that both the transmitter and the receiver, have a front-stage amplifier and a rear-stage amplifier. Consequently, neither the transmitter nor the receiver of Delavaux is provided with a dispersion compensation unit.

Therefore, Delavaux does not suggest or disclose any of the features as claimed in claim 25.

Independent claim 33 sets forth similar features as recited, for example, in claim 25. Therefore, Delavaux also does not suggest or disclose any of the features as claimed in claim 33.

Independent claims 48 and 53 claims a dispersion compensator provided between the front-stage amplifier and the rear-stage amplifier of the claimed optical amplifier. In light of the

above, Delavaux does not disclose that a dispersion compensator is provided between a front-stage amplifier and a rear-stage amplifier of an optical amplifier.

Independent claim 54 claims a dispersion compensator provided between the front-stage amplifier and the rear-stage amplifier of the claimed optical receiver. Thus, Delavaux does not disclose that a dispersion compensator is provided between a front-stage amplifier and a rear-stage amplifier of an optical receiver.

Therefore, Delavaux does not suggest or disclose any of the features as claimed in claims 48, 53 and 54 of the present application.

In view of the above, it is respectfully submitted that the rejection is overcome.

IV. REJECTION OF CLAIMS 48 AND 53 UNDER 35 U.S.C. § 102(B) AS BEING ANTICIPATED BY ISHIKAWA ET AL. (USP # 5,602,666)

On page 3 of the Office Action, claims 48 and 53 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ishikawa et al. (USP# 5,602,666).

The present invention as recited, for example, in claim 48 relates to a method comprising "said optical amplifier comprises a front-stage amplifier and a rear-stage amplifier cascaded with each other" and "said dispersion compensator being provided between said front-stage amplifier and said rear-stage amplifier."

Ishikawa discloses an optical dispersion compensation method for shifting a zero dispersion wavelength of an optical fiber to compensate for dispersion in an optical system.

In column 41, lines 26-29, Ishikawa discloses that an optical dispersion unit 32 is built in each of the transmitter 21, the repeaters 22 and the receiver 23.

However, Ishikawa does not disclose that the dispersion unit 32 is provided between a front-stage amplifier and a rear-stage amplifier of the transmitter 21, repeaters 22, and the receiver 23. In other words, for example, although Ishikawa discloses that a dispersion unit is built in the transmitter 21, repeaters 22, and receiver, he does not suggest or disclose that the transmitter 21, repeaters 22, and receiver comprise a front-stage and a rear-stage amplifier for the dispersion unit 32 to be provided therebetween. (Compare Figures 26-41 of Ishikawa and Figures 3A, 3B, and 3C of the present application).

Therefore, Ishikawa does not suggest or disclose the claimed optical amplifier having a front-stage amplifier and a rear-stage amplifier cascaded with each other in which a dispersion compensator is provided between the front-stage amplifier and the rear-stage amplifier as claimed, for example, in claim 48 of the present application.

Further, in Figure 39 and column 40, lines 19-23, Ishikawa discloses that a pair of optical amplifiers 26A and 26B are additionally provided at both of a preceding stage and a next stage to each group of optical dispersion compensator units 25A and 25B. (Compare Figure 39 of Ishikawa and Figure 3B of the present application.)

This, however, is clearly not the same as the claimed optical amplifier having a front-stage amplifier and a rear-stage amplifier, and a dispersion compensator provided between the front-stage amplifier and the rear-stage amplifier as claimed in claim 28.

Independent claim 53 sets forth similar features as recited, for example, in claim 48. Therefore, Ishikawa also does not suggest or disclose any of the features as claimed in claim 53.

In view of the above, it is respectfully submitted that the rejection is overcome.

V. REJECTION OF CLAIMS 20 AND 39-41 UNDER 35 U.S.C. § 102(B) AS BEING ANTICIPATED BY MATSUDA ET AL.

On page 3 of the Office Action, claims 20 and 39-41 are rejected under 35 U.S.C. § 102(b) as being anticipated by Matsuda et al. (*Electron. Lett.*)

The present invention as recited, for example, in claim 20 relates to a method comprising "a dispersion compensator provided in said optical transmitter, except when said optical transmitter corresponds to at least one end of said second segment, said optical transmitter comprises an E/O converter for converting an electrical signal into said optical signal, and a postamplifier for amplifying said optical signal, and said dispersion compensator being provided between said E/O converter and said postamplifier."

Matsuda discloses, in Figure 1, the setup for a recirculating loop transmission experiment.

The Examiner asserts that the transmitter corresponds to at least one end of the DSF segment, and under these circumstance the claims do not require a dispersion compensator in the transmitter.

However, it appears that the one end of the transmitter of which the Examiner refers, corresponds to an "AOM" which is thereby connected to a DSF. Thus, the transmitter of Matsuda does not correspond to a DSF segment. Consequently, Matsuda would need a dispersion compensator to anticipate claim 20.

It is respectfully submitted that MPEP § 2131 states that to anticipate a claim, the reference must teach every element of the claim.

Therefore, Matsuda does not disclose the claimed dispersion compensator provided in the optical transmitter as claimed, for example, in claim 20 of the present application.

Independent claim 39 sets forth similar features as recited, for example, in claim 20 of the present application. Therefore, Matsuda also does not suggest or disclose any of the features as claimed in claim 39.

In view of the above, it is respectfully submitted that the rejection is overcome.

VI. REJECTION OF CLAIMS 26, 27, 34 AND 34 UNDER 35 U.S.C. § 103(A) AS BEING UNPATENTABLE OVER DELAVAUX ET AL. IN VIEW OF ISHIKAWA ET AL. (USP # 5,602,666)

On page 4 of the Office Action, claims 26, 27, 34, and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Delavaux et al. in view of Ishikawa.

However, it appears that the Examiner intended to reject claims 26, 27, 34, and 35.

Nevertheless, our comments, above, in view of the teachings of Delavaux and Ishikawa, also apply here, since neither Delavaux nor Ishikawa anticipate the features as claimed in claims 25 and 33, respectively.

In view of the above, it is respectfully submitted that the rejection is overcome.

VII. CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: December 31, 2001

By: _____
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please CANCEL claims 10, 11, 18 and 19 without prejudice or disclaimer.

Please ADD the following NEW claims:

59. (NEW) A system according to claim 15, wherein each of said segments is formed from a single-mode fiber having a zero-dispersion wavelength of about 1.3 μm.

60. (NEW) A system according to claim 15, wherein said optical signal has a wavelength of about 1.55 μm.

61. (NEW) A system according to claim 21, wherein said first segment has a zero-dispersion wavelength of about 1.3 μm, and said second segment has a zero-dispersion wavelength of about 1.55 μm.

62. (NEW) A system according to claim 21, wherein said optical signal has a wavelength of about 1.55 μm.